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Solar Wind Ram Pressure Pulses and Dayside Auroras: Physical Mechanisms in the LLBL

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Solar wind ram pressure pulses have been demonstrated to cause dayside auroras. These auroras occur on the ionospheric ends of low latitude boundary layer magnetic field lines. The auroras caused by sharp pressure increases (fast forward shocks) and slow pressure increases will be compared on contrasted. FAST spacecraft and ground-based observations will be used to identify specific mechanisms that leads to the acceleration of charged particles to auroral energies.